GUIDE TO REQUIREMENTS FOR WASTEWATER SYSTEMS USING A WASTEWATER LAGOON

December 2004

DISCLAIMER

This guide provides a broad overview of Alberta Environment's requirements for wastewater systems using a wastewater lagoon. It does not replace or affect the legislative requirements. The person responsible for wastewater systems must follow all of the legislated requirements. If there is any conflict between this document and the *Environmental Protection and Enhancement Act (EPEA)* or its regulations, *EPEA* and its regulations take precedence.

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INTRODUCTION

Wastewater systems using wastewater lagoons must be registered with Alberta Environment prior to being constructed, expanded, operated, or reclaimed. They must be operated according to the *Code of Practice for Wastewater Systems Using a Wastewater Lagoon*. This is a guide to registering and understanding the Code of Practice.

WASTEWATER FACILITIES REQUIRING REGISTRATION

The Code of Practice only applies to the activities listed in item (d) of Schedule 2, Division 2 of the *Activities Designation Regulation*. The Code of Practice addresses all portions of the wastewater system including the wastewater collection system, lift station, wastewater lagoon, treated wastewater disposal via direct discharge or irrigation, and sludge application to agricultural land.

The Code of Practice does not apply to aerated lagoons, storm drainage systems or snow disposal sites. Requirements for storm drainage systems are presented in the *Wastewater and Storm Drainage Regulation* (Sections 2 – 7).

Existing Systems:

Wastewater systems that use wastewater lagoons, and operating under an *EPEA* approval prior to October 1, 2003, are automatically registered. The approval holder becomes the registration holder. The registration holder must continue to operate the system according to their *EPEA* approval and follow the requirements of *EPEA* and any other applicable legislation or regulations, including: *Activities Designation Regulation, Wastewater and Storm Drainage Regulation and Wastewater and Storm Drainage (Ministerial) Regulation*.

Alberta Environment will notify the registration holder when the facility must be operated according to the Code of Practice. The registration has no expiry date. See Section 11(2) of *Activities Designation Regulation* for further detail.

A new registration must be obtained before modifying or expanding an existing wastewater lagoon. The new registration application must reflect the actual activities to be carried out. For example, if the wastewater lagoon is structurally modified in size or in a manner that may affect the treatment, or if an alternative release method is considered, a new registration is required. Section A3.1.1 of the Code of Practice specifies the information that must be provided in the registration application.

New Systems:

Registration is required prior to the construction of a new wastewater lagoon. The design requirements are found in Section (5) of the *Wastewater and Storm Drainage Regulation*.

A registered wastewater system is allowed to use treated wastewater for irrigation on the land specified in the registration application. The Code of Practice covers using treated wastewater for irrigation.

Written authorization is required prior to disposing of treated wastewater other than through direct discharge or irrigation.

Section A3.1.1 of the Code of Practice sets out the information that must be provided to apply for a registration for a new wastewater lagoon.

HOW TO REGISTER

Step 1:
Refer to the following web page for the registration process:
www.gov.ab.ca/env/protenf/approvals/factsheets/EPEA_RegistrationProcess.pdf

Step 2:
The general requirements for registering are specified in the *Approvals and Registrations Procedure Regulation.* Section A3.1.1 of the Code of Practice outlines the specific information to be submitted.

Step 3:
The application review process will not begin until a complete application is received. The activity may not proceed until the registration is issued, so it is advisable to allow sufficient lead-time for the application review and decision.

Step 4:
Send all registration applications to:

Alberta Environment
Regulatory Approvals Centre
Main Floor, Oxbridge Place
9820 – 106 Street
Edmonton, Alberta T5K 2J6
Phone: (780) 427-6311 (to connect toll-free first dial 310-0000)
Fax: (780) 422-0154

The Regulatory Approvals Centre will record receipt of the application and forward it to the appropriate Director in the region for which the project is being proposed.

Step 5:
Facilities that already hold a registration and require modifications shall inform the Director in writing of their intentions. Contact the Regulatory Approvals Centre for the Alberta Environment District Office nearest you.

DESIGN REQUIREMENTS FOR A WASTEWATER SYSTEM USING A WASTEWATER LAGOON

The Code of Practice regulates most aspects of wastewater systems served by a wastewater lagoon including: collection, treatment, treated wastewater disposal through direct discharge or irrigation, and application of sludge to agricultural land.

All new systems must meet the design standards in effect at the time of an application for registration. Existing systems are not required to meet new published standards until the wastewater system is expanded, upgraded, or the Director gives notice. The *Standards and Guidelines For Municipal Waterworks, Wastewater and Storm Drainage Systems* outlines the design standards. Any proposed deviations from the standards must be identified in the application for registration and authorized in writing by the Director.

General minimum design standards for a wastewater system using a wastewater lagoon are set out in Section 5 of the *Wastewater and Storm Drainage Regulation*. Detailed requirements are set out in the *Standards and Guidelines For Municipal Waterworks, Wastewater and Storm Drainage Systems*.

The extension or replacement of portions of the collection system must meet the design requirements specified in Section 6 of the *Wastewater and Storm Drainage Regulation*. The Director must be notified in writing prior to construction. The Director may request detailed design information and advise that deficiencies must be addressed, so it is advisable to allow sufficient time for that prior to proceeding with construction.

Written authorization from the Director is required prior to a proponent seeking an alternative to the Code of Practice for disposing of treated wastewater, or to applying sludge on agricultural land.

SPECIFIC CODE OF PRACTICE REQUIREMENTS

The Code of Practice for Wastewater Systems Using a Wastewater Lagoon contains three major sections entitled:

- Definitions
- General Provisions (applying to all aspects of the wastewater system)
- Requirements Specific to Portions of the Wastewater System
    - A. Wastewater Collection Systems and Wastewater Lagoons
    - B. Treated Wastewater Irrigation
    - C. Sludge Application to Land

Definitions

If a term is used in *EPEA*, the *Wastewater and Storm Drainage Regulation* or the *Activities Designation Regulation* and is not defined in the Code of Practice, the definition in *EPEA*, the *Wastewater and Storm Drainage Regulation* or the *Activities Designation Regulation* will apply.

If a term is used in *EPEA*, the *Wastewater and Storm Drainage Regulation* or the *Activities Designation Regulation* and is defined in the Code of Practice, the definition in the Code of Practice will apply.

General Provisions

Section 2.2.2 of the Code of Practice requires that analysis be conducted at an approved laboratory, unless otherwise specified in writing by the Director. Approved laboratories are laboratories that are accredited by the Standards Council of Canada to analyse for the parameters that must be monitored and reported under this code, except as indicated under Alberta Environment's *"Laboratory Data Quality Assurance Policy"*

Section 2.3 If any of the conditions of the Code of Practice or the requirements under the Act and Regulations have not been met, the registration holder is required to immediately report the incident to the Director (780) 422-4505.

Requirements Specific to Portions of the Wastewater System

A. Wastewater Collection Systems and Wastewater Lagoons

Refers to Section in Code of Practice	Guidance
A3.1.1	The application for registration is only required for a new wastewater lagoon or modification of an existing lagoon. The Director should be consulted with regard to the type of modification to an existing wastewater system that would trigger an application for re-registration.
A3.1.2 and A3.1.3	Written authorization from the Director is required prior to implementing any alternate methods of disposal.
A4.1.4	This requirement ensures water users downstream of the location of the lagoon discharge are given notice prior to discharge where they have expressed interest in the past. The extent and method of the notice is at the discretion of the registration holder.
A4.1.5 (a)	This clause sets out how frequently a lagoon can be discharged. Unauthorized discharges, including unexpected discharges that may result during a wet year, are considered a contravention of the Code of Practice and must be reported as required in Section 2.3.1
A5.1.3 (c)	Any unauthorized release that has or may enter a watercourse must be monitored as indicated in Table A5-2. If the unauthorized release is secured and cleaned up so that there is no possibility of it entering a watercourse, monitoring is not required.
A7.1.4	This clause makes provision for electronic reporting in the future.
A8.1.1 (v)	The operating record for the wastewater system should at a minimum provide information regarding: ➢ Wastewater collection operation including: special care for any portion of the system, schedule for flushing the system, etc. ➢ Wastewater lagoon operation including: when is it usually discharged, flooding, blockage, or erosion of the receiving watercourse during discharge, site management, etc. ➢ Procedures for treated wastewater irrigation or sludge management The intent of the operating record is to provide sufficient information to enable any certified operator to take over the operation of the system.

B. Treated Wastewater Irrigation

Refers to Section in Code of Practice	Guidance
B3.1.1 (a)	Wastewater must only be used for irrigation on crops authorized in the *Guidelines for Municipal Wastewater Irrigation*, published by Alberta Environment. The crops that are currently authorized for irrigation with treated wastewater include forages, coarse grains, turf, and oil seeds. The registration holder must provide the information set out in Section B3.1.2 to the Director, in writing, prior to proceeding with treated wastewater irrigation.
B3.1.1 (b)	The irrigation of any other vegetation using treated wastewater requires written authorization from the Director.
B4.1.7 and B4.1.8	Golf courses and parks users must be well informed that treated wastewater is being used for irrigation.
B4.1.9	The public must not be present when wastewater irrigation occurs. The registration holder is responsible for preventing public access to irrigation sites.

C. Sludge Application

Refers to Section in Code of Practice	Direction and Clarification
Section C	The Code of Practice outlines the requirements for sludge application to agricultural land. Where a Code of Practice governs application of sludge from a wastewater lagoon to agricultural land, written authorization from the Director is not required (Section 8(2) of *Wastewater and Storm Drainage Regulation*).
C4.1.3 (b)	An approval from "the local authority of all municipalities in which land that is affected by the project is located" is required in the Code of Practice.

Any comments, questions, or suggestions regarding the content of this document may be directed to:

Alberta Environment
Science & Standards
4th Floor, Oxbridge Place
9820 – 106 Street
Edmonton, Alberta T5K 2J6
Phone: (780) 427-7533

Additional copies of this document may be obtained by contacting:

Alberta Environment
Education & Information Centre
Main Floor, Oxbridge Place
9820 – 106 Street
Edmonton, Alberta T5K 2J6
Phone: (780) 427-2700
Email: env.infocent@gov.ab.ca

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If you have any questions or would like more information, contact your local Alberta Environment office. For toll free access, dial 310-0000 from anywhere in Alberta.

APPENDIX

The following are some of the documents that set out requirements and obligations for environmental protection at wastewater systems using a wastewater lagoon.

- *The Environmental Protection and Enhancement Act (EPEA)*
- *Water Act*
- *Activities Designation Regulation*
- *Wastewater and Storm Drainage Regulation*
- *Wastewater and Storm Drainage (Ministerial) Regulation*
- *Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems,* (Standards and Guidelines document) published by Alberta Environment
- *Guidelines for Municipal Wastewater Irrigation* published by Alberta Environment
- *Guidelines for the Application of Municipal Wastewater Sludges to Agricultural Lands* published by Alberta Environment
- *Approvals and Registration Procedures Regulation*
- *Code of Practice for Outfall Structures on Water Bodies*
- *Code of Practice for Wastewater Systems Using a Wastewater Lagoon*
- *Code of Practice for Wastewater Systems Consisting Solely of A Wastewater Collection System*